1. BOTH INTERNATIONAL & INLAND: A 200-meter vessel restricted in her ability to maneuver, at anchor, will sound a fog signal of _____.

A. a 5-second ringing of a bell forward and a 5-second sounding of a gong aft at intervals of 1 minute
Incorrect: This is the fog signal for an idle vessel of 100 meters or more in length, at anchor.

B. one prolonged followed by two short blasts every 2 minutes
Correct Answer: This is the correct fog signal for a vessel restricted in her ability to maneuver, underway or at anchor, regardless of her length. Vessels are considered to be restricted in their ability to maneuver, while at anchor, if they are attending to the maintenance of a navigation mark, submarine cable, or pipeline; or if they are engaged in dredging, surveying, or conducting underwater operations. These vessels, while constrained, are required to sound the same fog signal that would be sounded while underway.

C. one prolonged followed by three short blasts every minute
Incorrect: The sounding of a fog signal of one prolonged blast followed by three short blasts is required for a manned vessel being towed. If more than one vessel is being towed, the last vessel of the tow, and only if it is manned, will sound this signal. The sounding of this signal will be at intervals not to exceed two minutes, which may include being sounded at more frequent intervals, such as once every minute.

D. one prolonged followed by three short blasts every 2 minutes
Incorrect: This is a variation of the statement in "C" above. The indicated fog signal is to be sounded by a manned vessel being towed. When practicable, this signal shall be made immediately after the signal is sounded by the towing vessel. These vessels may sound their signals more frequently than once every two minutes, but the increased frequency is not required.

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2. A vessel is heading magnetic east and its magnetic compass indicates a heading of 086°. Which action should be taken to remove this error during compass adjustment?

Note: To enable the compass to indicate magnetic east (090°) by removing this error, the "compass card" must be rotated counterclockwise when the "blue south pole" end of a compensating magnet is attracted to the "red north pole" of the compass. The resultant action of the three incorrect choices will cause the "card" to rotate clockwise. The removal of error on east and west headings is accomplished by utilizing the fore-and-aft compensating bar magnets; three inches in length and fitted horizontally into a tray installed in the binnacle and whose vertical height is adjustable.

A. If the blue ends of the magnets are aft, and the fore-and-aft tray is at the top, you should add some magnets.
Correct Answer: By adding more magnets to the tray, the magnetic flux of the corrector magnets will be increased. Since the blue poles of the corrector magnets are aft of the center of the compass, it will induce a greater repulsion to the blue-south pole end of the compass to the right-hand side of the compass magnet and greater attraction of the red-north pole to the left-hand side of the compass magnet, causing the compass card to rotate counterclockwise as required.

B. If the blue ends of the magnets are aft you should lower the fore-and-aft tray.
Incorrect: By lowering the tray the effect of the magnetic flux is decreased. This reduces the repulsion on the blue-south pole of the compass magnet to the right-hand side and the attraction of the red pole to the left-hand side allowing the compass card to rotate clockwise.

C. If the blue ends of the magnets are aft, and the fore-and-aft tray is at the top, you should reverse the magnets.
Incorrect: Reversing the magnets requires the red ends to be placed aft in the tray. This action will increase the attraction of the blue-south pole on the right-hand side and repulse the red-north pole on the left-hand side causing the compass card to rotate clockwise, increasing the compass error.

D. If the blue ends of the magnets are forward, and the fore-and-aft tray is at the bottom, you should add some magnets.
Incorrect: This action also increases the attraction of the blue-south pole and the repulsion of the red-north pole, causing the compass card to rotate clockwise and increase the compass error.

3. Under the IALA-A Buoyage System, when entering from seaward, a buoy indicating the preferred channel is to starboard may have a _____.

Note: Historically, the International Association of Lighthouse Authorities (IALA) has defined two regions. The IALA-"A" (Region "A") buoyage system is used throughout Africa, Asia and Europe. The IALA-"B" (Region "B") system is used throughout the Americas and in the Philippines. In Region "B," red, even-numbered, "nun" buoys mark the right side of the channel (returning from sea) and thus, the expression, "Red-right-returning." This is reversed in Region "A," with green, odd-numbered "nun" buoys marking the right side of the channel (returning from sea). In both regions, red buoys are always even numbered. Preferred channel buoys are identified with red and green horizontal bands. In both systems, the top band color identifies the main channel, and if this buoy is lighted, the color of the light will be the same as the color of the top band.

A. green light

Incorrect: If a lighted buoy is used to indicate the main or preferred channel, the color of the light must be the same as the topmost color of the buoy, and in this instance would be red, not green.

B. long-flashing light characteristic

Incorrect: If the buoy is lighted, then the light characteristic used to indicate the preferred channel would be a composite group-flashing (2+1). This flashing characteristic is only permitted when indicating the preferred channel. A long-flashing light may be used to indicate a buoy that is otherwise marking the boundary line of the channel.

C. square topmark

Correct Answer: A square shape is shown on a paper chart as an icon for a "can" buoy (cylindrical shape) as if the silhouette of the buoy were viewed at the surface of the water. In both systems, if an unlighted buoy is to be used to indicate that the preferred channel is to its right, a "can" buoy will be deployed. The uppermost band and topmark will be colored red in Region "A."

D. conical shape

Incorrect: A cone-shaped "nun" buoy always indicates the channel is to port when an unlighted buoy is used to indicate the preferred channel.

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4. You are moving a gas free tank barge to dry dock for repairs. The barge must have onboard a valid _____.

A. Gas Free Certificate

Incorrect: There is no requirement to gas free the barge before moving it. In addition, nothing has been stated as to the type of repair that is to be made, of which "hot work" on the barge may not be required. However, certification of an appropriate gas free environment will be required before work is permitted to be performed in a tank, and can be provided after the barge has arrived at the repair yard.

B. Certificate of Inspection

Correct Answer: Since tank barges are inspected vessels, this vessel is required to have a valid Certificate of Inspection at all times.

C. Permit to Proceed and Hot Work Permit

Incorrect: A "Permit to Proceed" would be required for an inspected vessel that does not have a valid Certificate of Inspection. A "Hot Work Permit" is not required to move the barge, and is only required before any cutting or welding may begin.

D. All of the above

Incorrect: Choice "B" is the only correct answer.